

From boatanchors@theporch.com Wed Apr 3 07:47:23 1996
From: Jeffrey Herman <jherman@hawaii.edu>
Subject: 32S1 for \$150?
Message-ID: <Pine.SV4.3.91.960402204358.7384A-100000@uhunix5>

We have a weekly swap net on the 2M CB band here in Honolulu. Tonight there was listed a Collins 32S1 xmtr with power supply for \$150. Since my Galaxy and Heath rigs are back in Nevada and I have no QRO gear here, I'm wondering if I should grab this 32S1. I've never owned any Collins gear and have not paid close attention to the Collins postings on here. Assuming the rig works, is this a good price? (Why do I get the feeling that this is a stupid question?)

If I pass the rig up, I'll post the seller's phone number on the net.

Jeff NH6IL

From boatanchors@theporch.com Wed Apr 3 14:27:58 1996
From: John Shriver <jas@shiva.com>
Subject: Re: 5AR4 supply
Message-ID: <199604031805.NAA22067@shiva-dev.shiva.com>

The 5AR4 is a scaled-up 5V4. Like that tube, it has controlled 15-second warm-up. This prevents cathode stripping on any power tubes getting B+ on it, since it warms up even slower than them. It also has a very low forward voltage drop.

It was widely used in hi-fi amps since the late 1950's. Many of them ran it at the absolute limits, particularly on voltage. There was a Russian tube that has been sold as a 5AR4, it arced out instantly on many of those hi-fi amps. (It was alleged it was really a 5Z4. There may be a better one now.)

The 5AR4 is also widely used on guitar amps. Those folks use them in self-destruct mode. Any serious rock group has to replace all the tubes after every performance. They are the primary consumers of NOS tubes. (They are also the primary market for new tubes from Russia & China.)

The 5AR4 being designed into a lot of the wildly expensive single-end triode amps. The folks who can afford \$10,000 amplifiers will gladly bid up the price on a 5AR4. (Until recently, mainstream tube hi-fi amps had solid-state rectifiers.) Yes, a 5AR4 does have less switching hash than a solid-state diode, but there are soft/fast-recovery diodes, and a small capacitor can eat the hash.

Prices on 5AR4's vary. Mullard is outa sight (objects of religious worship in Japan), GE is a little more down to earth, recent Russian quite affordable.

You could use a 5U4 in your regulated supply, but there will be risks of cathode stripping on the pass tubes. (Which are probably also pricey now.) If there's a standby switch, you needn't worry about stripping. Also, the 5U4 will reduce the regulation of the raw supply a bit.

You might also get away with a 5V4 if you watch the load current. The Russian 5AR4 may be fine for your needs also.

From boatanchors@theporch.com Wed Apr 3 14:27:58 1996
From: sinned@VNET.IBM.COM
Subject: 75A-4 Muting
Message-ID: <199604031702.LAA27670@uro.theporch.com>

Can anyone tell me how to get the muting function to work?
I have no manual but need to know what/how to use the terminals marked M-S-1-2 that are located at the rear of the receiver, so I can mute during transmit.
Thanks,
Dennis KC5EPZ

From boatanchors@theporch.com Wed Apr 3 14:27:58 1996
From: Jim Dillon <beadgal@ptialaska.net>
Subject: Re: 75A4 muting
Message-ID: <01BB213C.EB9FE6A0@juneau_17.dialups.ptialaska.net>

Hi Dennis and fellow investors-

>From da good book (520 5052 00) 1 June '55:

Terminals M and G on center term strip at rear are provided for conn to =
a source of muting voltage for break-in CW op. This source must be =
capable
of delivering +20 volts to the terms for key-down muting and 0 volts =
key-up.
(32V1/2 and KW-1 provide this)
Muting voltage may be obtained from the cathode resistor of a keyed

stage which is biased to cut-off during key-down, from a resistor in series with a cathode keyed stage, or from a battery in series with auxiliary contacts on a keying relay (I like the sound of this one-Jim, not Art) Terminal G must be connecte to ground potential and M to the source of positive voltage.

*****NOTE***** (Art's-and my-emphasis)

Neither the disabling nor the muting circuits provide protection to the antenna input circuit

Stanby sw. info:

terms marked 1 and 2 on rear are across a blocking bias resistor and are in parallel with contacts on the off/stby/on cal switch. They may be connected to contacts of a send-receive relay for ext stby control. With switch in Standby pos, closing the standby circuit will allow the receiver to operat. Opening the standby circuit will disable the audio output tube and all tubes which are connected to the AVC line.

Jim Dillon WL7CMQ beadgal@ptialaska.net

From boatanchors@theporch.com Wed Apr 3 07:47:23 1996

From: Kevin Pease <hamradio@mm1001.theporch.com>

Subject: Re: AM mode and Linear Amplifiers

Message-ID: <Pine.LNX.3.91.960402200758.21358A-100000@mm1001.theporch.com>

I run a Drake L4 with two 3-400's at 200 to 250 watts of carrier output. I drive it with my Johnson Ranger useing a 4 to one attenuator. AM linear is not verry efficient so it increases the plate disipation of the tubes The L4 does just fine in this mode with only a dull red glow on the 3-400 plates.

Kevin Pease

WB0JZG Mount Juliet, TN.

From boatanchors@theporch.com Wed Apr 3 07:47:23 1996

From: lkayser@WorldLink.ca (Larry Kayser)

Subject: AM, Linear and High Level

Message-ID: <9604030120.AA19960@beacon.WorldLink.ca>

AM linear operation can rarely exceed 30 to 35% overall efficiency without distortion reaching easily heard levels. High Level AM, ie Plate Modulation can efficiently modulate 100% of a 75% DC final amplifier efficiency for

about at least a 3 db improvement. There are some tricks you can use to make the linear see an AM signal that is always 100% modulated. The rf power is varied to provide a load for the modulator, several systems were developed in the late 1930's and 1940's.

A while back I mentioned the work of W3PH1, Fred, using DSB with multi KW's of high level audio with an amplifier, one tube inverted, for suppressed carrier DSB, he could put out kW's of audio with no carrier, really got the guard house lawyers going full blast on 7296 for a few years in the 1960's. REAL POWER on DSB upset the norms of the day.....

Lots of fun

Larry
va3lk / wa3zia

From boatanchors@theporch.com Wed Apr 3 14:27:58 1996
From: "Joseph J. Curry" <71407.1774@compuserve.com>
Subject: AM/Linear Operation
Message-ID: <960403175047_71407.1774_FHV123-2@CompuServe.COM>

Fellow Boatanchor Afficionados:

I have been following the thread re AM operation with a linear amplifier and have a few observations to make.

First, the efficiency is low compared to a Class C amp (roughly half the efficiency of Class C). Operation of a linear in AB1 or B mode, will give an efficiency of roughly 35%. An easy way to think about why this is so is that the amplifier spends half its time at a peak efficiency of 70-75% and half its time at an efficiency of zero (when the modulated dc to the amp has a value of zero volts on negative peaks).

Second, this means that to run maximum allowed AM power (375 watts of carrier, 100% modulated, 1500 watts PEP), you need to run about 1000+ watts of input. This results in a very high plate dissipation (625+ watts).

Third, forgetting about filament power for a moment, let's see how much power it takes to generate 375 watts of 100% modulated carrier with Class C and high level plate modulation. At 70% Class C efficiency (readily do-able) you need to run about 535 watts input to the final. You also need to supply audio power from the modulator that is at a level of 50% of the input to the Class C amp. That means the modulator must put out 50% of 535 watts or 268 watts. At 70% Class B modulator efficiency, this means you need to run the modulator at 383 watts input. All this assumes that the modulation transformer is 100% efficient...definitely not the case. Even if the xfmr is 90% efficient (a damned

good transformer over the audio range), then you will need 425 watts of input to the modulator to get the requisite power.

Now let's do the sums....535 watts for the Class C amp plus 425 watts for the modulator....that's 960 watts. If I add in the filament power for the Class B modulator, we're pretty close to 1KW!

The trick in all this is that the AM signal must be of relatively low power compared to the output, otherwise efficiency drives the balance the other way. Translation: it is more efficient to run a Ranger as a modulated AM source than a Viking II or Valiant that is swamped to drive the linear. Better yet, use of low level modulation (AM) and moderate amplification.

That is what I use regularly. I run an HT-37 (a rig, I might add, that has excellent audio) followed by an HT-33A. Since the 33A has capability for a kilowatt of plate dissipation, running the legal limit is a piece of cake with a generous reserve. I defy anybody to tell that I am not running a high level modulated rig. The audio is great.

The bottom line is that you have to be careful about the efficiency argument, but the linear plus AM concept is well worth considering. I have worked several Left Coast stations that are running Rangers or Multi-Elmac AF67s plus a Henry 2K and they sound wonderful.

Now lest the flames appear and I have offended the AM purists, I am in the process of building a "pure" AM rig running a pair of 813s modulated by a pair of 572Bs (811s with better plate dissipation also zero bias at 1500 volts). I am doing this not because I believe it will sound any better than the HT37/33A combo, but I want to build it for the hell of it. PLUS I want to have a high power rig on 160 meters.

One thing I didn't mention is the cost of construction and that clearly mitigates for the linear....the mod xfmr tips the balance against Class C. But, hey, I don't want to make these for a living, this is just a hobby, you know, fun. Besides, I was able to locate a mod xfmr here on Boatanchors. In fact, I am definitley not keeping track of what its costs to build it, because I don't want to know. I guarantee that by the time I am done, even using surplus parts and swapmeet items, it will cost more than I could purchase a Globe King 500 for (assuming I could find one). The real bottom line is I like working with this stuff and being an old homebrewer from way back, this time I get to do it right!

Thanks for the byte space.

73,

Joe KE6LFT (ex-K3IC0)

All sorts of fine and well reputed rigs were heard last night.

ARC-5 de K4MSG/Paul - this thing is the sweetest sounding arcusfivus
that I have ever heard (and nil mods thereupon).

DX-60 de K9N0/Paul - a fine classic and clean sounding rig

TCS de KC5EPZ/Dennis - a fine classic military canoeanchor

Home Brew Breadboard 35Watter de W5TVW/Sandy - this is a very clean
and crisp breadboard Glowbug rig!
Kudos to the HB/Glowbuggite crowd.

Johnson Viking Challenger de WA2VM0/Bob - this was a real big
sounding barnburner rig QSA5.

Gonset GSB-100 de K2LMQ/Paul - another fine classic
novice rig with a big signal.

HeathKit HW-16 de NA4G/Bob - one o' them thar late
model TVSweepusTubus novice classics

RadioMarine ET-8019A de NA4G/Bob - ol' Big Bertha Radiomarine
burning a pair o' 813's into the late nite
She is one hot momma!

So, all you lurkers, ya missed another fine watch with all sorts o' neato
an cool daddyo rigs! Dusts ye off yer bottleburners an' joins in ye on the
fun and cammaraderie!

I challenges each and every one o' you fellers (an' ladies too) to grapples
ye up yer tin cans atop yer noggins, readys yer keys at the fore, an plys
ye a fine BA/GB watch aboard the net. No rig is too small. No rig is too
big. No rig is too woebegone. No operator/fist/QLF is unwelcome or will be
turned away. We has a' started a fine and goodly thing 'ere mateys!

QRG 7025 QTR 0100/0200Z

QRG 3579.545 QTR 0300/0400/0500/0600Z

See's ye there, byes the bye..... fer a fine BA/GB watch!

73/ZUT DE NA4G/Bob UP

From boatanchors@theporch.com Wed Apr 3 14:27:58 1996

From: pbock@melpar.esys.com (Paul H. Bock)
Subject: Re: BA/GB Net Fist Function report
Message-ID: <9604031756.AA26193@syseng1.se.melpar.esys.com>

>All sorts of fine and well reputed rigs were heard last night.

> ARC-5 de K4MSG/Paul - this thing is the sweetest sounding arcusfivus
> that I have ever heard (and nil mods thereupon).

Thanks for the kudos, Boatanchor Bob.....except for removing the antenna relay, rewiring the filaments for 12.6 VAC, and providing an external relay supply to "key" the keying relay (K53), no mods were/are necessary. In addition to the aforementioned filament and relay supplies I provide 450 VDC (under load) to the PA plates, 240 VDC to the screens, and 210 VDC regulated for OSC B+. Yes, K53 clatters a bit, but who cares?

It is useful to "sequence" the relay contacts by bending slightly so the OSC comes on first and turns off last.

And if it still chirps, try another 1626 (the first one I used was a little microphonic, and drifted, too).

73,

Paul, K4MSG

From boatanchors@theporch.com Wed Apr 3 14:27:58 1996
From: rdkeys@csemail.cropsci.ncsu.edu
Subject: Re: BA/GB Net Fist Function report
Message-ID: <9604031844.AA103120@csemail.cropsci.ncsu.edu>

> Yes, K53 clatters a bit, but who cares?

Actually, the clattering of the relays is musick to a chop's ears!
It keeps ya abreast o' how yer rig be a'workin!

Back in the early days (1920's and 30's) my OM used to read the relays on his WAR circuit rigs (BIGG ol military rigs at Ft. Sam Houston) to keep up with the goins-on of the ops and to keep tabs on which rig to bring up on what frequency. All this several miles away from where the operator was actually sitting.

Relays make good sidetone generators, when properly resonating, and you can tell right off, if something is amiss, because the timbre of

the clackety-clack goes sour.

Note..... some relays have a much better musical sound and timbre than others. The GE relays used in the BC-191/BC-375 and TCM/TCU gear make a great clicky sound. The ones in the TBW just sound a hard clunk. The ones in the TCS make in intermediate hard clunk, with some stacatto. The ones in the ARC-5 are dainty harpsichord musick by comparison..(:+}}..

All ye fellers wat's thought dem thar relays was noisy.....

..... nay, it be sweetmusick ta de ol' 'eadbone noggin!

73/ZUT DE NA4G/Bob

From boatanchors@theporch.com Wed Apr 3 14:27:58 1996
From: pbock@melpar.esys.com (Paul H. Bock)
Subject: Re: BC modulation, etc.
Message-ID: <9604031748.AA26064@syseng1.se.melpar.esys.com>

>Is assymmetrical modulation on BC stations the reason why some
>announcers have that gravely, gritty sound normally associated
>with sandy-state portables, even on a good tube set?

Usually it's overuse of compression in the audio chain (I've seen jocks run the compression level to 30 dB or more to keep the "talk power" up and give the station more "punch." Thank goodness for peak limiters). These same guys used to carefully wrap a layer two of mylar splicing tape, using a carefully spiralled cut for smoothness, around the turntable capstan to make the music sound "more upbeat." With the switch to running carted music on the air (to keep from wearing out the vinyl) they used a variable-speed turntable in Production to dub to cart, thereby achieving the same effect.

Wonder how they "goose up" the speed of a CD? If it can be done, they've no doubt figured it out.....

73,

Paul, K4MSG

From boatanchors@theporch.com Wed Apr 3 07:47:23 1996
From: jproc@worldlinux.com
Subject: RE: bc348

Message-ID: <Chameleon.4.01.2.960402195632.jproc@>

>Does anyone know where i can find a schematic for a bc348? And thanks to all

Jerry,

If I remember correctly, you can download a bunch of schematics in GIF format from URL:

<http://137.80.1.2/pub/hamradio/schematics>

I'm sure that you will find the BC348 in that batch.

Regards,

~~~~~  
Jerry Proc VE3FAB  
E-mail: [jproc@worldlinx.com](mailto:jproc@worldlinx.com)  
Radio Restoration Volunteer  
HMCS Haida, Toronto Ontario  
~~~~~

From boatanchors@theporch.com Wed Apr 3 07:47:23 1996
From: debral@falcon.cc.ukans.edu
Subject: Belden 8008 and 8009 ant wire << help >>
Message-ID: <199604030313.WAA26085@postoffice.reston.mci.net>

Hello fellow AnChOrites:

Well, warm weather is fast approaching, and that, coupled with an upcoming move to a new QTH, has me thinking about stringing a couple of good old fashioned doublets. Got the insulators, got the trees, got the urge.

What I don't have is the WIRE.

If memory serves, I used to get some really nice soft-drawn copper stuff from Belden (8008 12AWG, 8009 14 AWG), but I don't know where to find it now.

Can one of you point me in the right direction to find this stuff (or a very close copy)? And, YES, I know the price of copper has gone sky high. 8-(

73s

Bill Worthington
AA4FM/0
Eudora, Kansas, USA

From boatanchors@theporch.com Wed Apr 3 07:47:23 1996
From: Ray Cote <75121.100@compuserve.com>
Subject: Coil forms
Message-ID: <960403080258_75121.100_FHI52-3@CompuServe.COM>

Ran across 4 coil forms, No names or marks. Is there generic coil forms for the "wind your own" ?

They are the standard 5-pin dark brown bakelite type material. If anyone wants them, they are yours for \$2.00 ea plus a couple dollars for the shipping.

Regards from Honolulu,
Raymond J. Cote

From boatanchors@theporch.com Wed Apr 3 14:27:58 1996
From: "Nagle, Timothy E EA" <Nagle@P03.EA.unisys.com>
Subject: RE: Coil forms
Message-ID: <31629217@po5.cp.unisys.com>

Yes, I would be interested in them - or at least one of them.

Let me know how you want to arrange payment. Check to your home address?

Thanks,

Tim Nagle
KB0QOM
1641 E. Old Shakopee Rd.
Bloomington, MN 55425

(612) 881-4648 (home)
(612) 687-2940 (work)

nagle@po3.ea.unisys.com

From: boatanchors
Subject: Coil forms
From boatanchors@theporch.com Wed Apr 3 07:47:23 1996
From: Rick Blank <rblank@txdirect.net>
Subject: DX Engineering Speech processor Help Needed
Message-ID: <1.5.4b12.32.19960403010217.006927cc@txdirect.net>

A friend of mine has acquired one of these beasts fo the KWM2 series and is looking for a wiring diagram or any other information that one may have on this unit...

If anyone has any info on one of these, let me know and I'll pass that info along.

Thanks

Rick Blank, KI5SL	rblank@txdirect.net
2223 Blanco Road	KI5SL@K3WGF.STX.USA.NOAM
San Antonio, Texas 78212	AMSAT NA#26195

From boatanchors@theporch.com Wed Apr 3 07:47:23 1996
From: don merz <71333.144@compuserve.com>
Subject: FS & Manuals wanted
Message-ID: <960403014803_71333.144_DHB48-1@CompuServe.COM>

For Sale

CONTACT: Don Merz, N3RHT: 47 Hazel Drive, Pittsburgh, PA 15228.
412-234-8819 (weekdays, EST or leave a message anytime).
71333.144@compuserve.com

Military MX-2840/URR "Audio Frequency Detector." This is a 2" high, 19" rackmount accessory for the R390A. It takes the 455khz IF output from the R390A, R390 or any receiver with a 455khz IF output and replaces the audio stage. Only 2 controls, volume and on/off. All solid-state and runs on 110vac. Operates into 600 ohm load--headphones or speaker. The manual is marked "National Security Agency, Fort George G, Meade, MD, October, 1962." Notes in the manual seem to indicate that only 39 were made. I have two of these brand new in sealed boxes with manuals. \$59 each

WANTED

Manual or any information on Electronic Eye Equipment Company "MON-KEY" keyer. This is a neat 3-tube keyer with sidetone oscillator. It has a

beautiful black wrinkle doghouse on the right with the electronics inside and a sideswiper paddle under a plastic cover on the left. The whole thing is on a bakelite base. It runs on 110VAC. Any info appreciated.
Manual or any information on the Millen 90810 VHF transmitter. This uses a 2E26 and a 3E29 (I think) plus a 6AG7Y in a Bliley CCO module. Was this another ARRL Handbook design? Any help appreciated.

--

From boatanchors@theporch.com Wed Apr 3 07:47:23 1996
From: WJoeW@aol.com
Subject: FS: National, Eddystone and Gonset
Message-ID: <960402221816_461077593@emout04.mail.aol.com>

One of my friends, W5YFT, has some nice B/A he brought by for me to peddle for him.

Here they are:

1. National NC-183 (not D) with matching speaker
Very nice condition and works very well. \$250
(no manual)
2. Gonset G-43 general coverage receiver
Very nice except not all knobs original
Extremely sensitive radio. \$115
(no manual)
3. Eddystone 830/4 (15 tubes) Rare.
Very nice, restored, beautiful radio,
with the famous Eddystone slide rule dial,
works very well. Not all knobs are orig.
Covers 180-560kc, 1.5-30mc (9 bands)
With manual. \$225
4. Heathkit 1-A GDO, 4 coils, 2-100 mc. \$20

I restored these three radios a couple of years ago and they are in tip-top condition.

e-mail if interested to

wjoew@aol.com

Joe

N5ZYA

From boatanchors@theporch.com Wed Apr 3 14:27:58 1996
From: rdkeys@csemail.cropsci.ncsu.edu
Subject: Good Listening/Marker/RX testing QRG
Message-ID: <9604031632.AA102949@csemail.cropsci.ncsu.edu>

I was perusing the bands last weekend, after the sad demise of WLO from the CW broadcasting biz, looking for good background music for playing on the boatanchors and glowbug regenerators. The following may be of interest as some of the last remaining CW broadcasts:

STATION	BCST RUN	QRQ	QTR	QRG
-----	-----	-----	-----	-----
WCC	daily tfc list/wx	25wpm	1650Z	6376, 8630
WCC	sunday ARA free press	25wpm	1750Z	6376, 8630
VCS	daily tfc list/wx	25wpm	1500Z	6491.5, 8440
WNU	daily tfc list/wx	30wpm	1550Z	8570 khz
WLO	daily tfc list/info	31wpm	0200Z	4343, 6416, 8514

All of the above make great background music for listening to while playing with or testing out your BA/GB receivers. Most are running several KW and usually have fairly strong signals.

It seems noone does any nite CW broadcasts anymore, that I can find.

If anyone knows of any others lurking about that are good to listen to please QSP NA4G with the info, and I will report a followup to the lists.

73/ZUT DE NA4G/Bob

.... we's a'gotta keeps de ol' bottleburner receivers percolatin' wid dat fine ol' CW background sweetmusicks, ye knows.....(:+}}.....

From boatanchors@theporch.com Wed Apr 3 07:47:23 1996
From: Ray Cote <75121.100@compuserve.com>
Subject: GV3R???
Message-ID: <960403080246_75121.100_FHI52-2@CompuServe.COM>

<Fred Bohner Arlington,VA>
<Wrote>

<Got this Saturday at Timonium,
<it is marked GV3A 1300R,
<it is in a pencil type envelope
<but with only two leadouts.
<It is not listed in any of my tube books.

I have a few of those also and cannot ID them either. All I know is they are made by Victoreen and they have 2-pins or wires as leadins. Anyone shed some light on these or the company Victoreen?

I have:

GV3B-400
GV4S-310
GV4S-3100
GV4S-410

From boatanchors@theporch.com Wed Apr 3 14:27:58 1996
From: John Shriver <jas@shiva.com>
Subject: Re: GV3R???
Message-ID: <199604031453.JAA11165@shiva-dev.shiva.com>

From: Ray Cote <75121.100@compuserve.com>

<it is marked GV3A 1300R,

I have a few of those also and cannot ID them either. All I know is they are made by Victoreen and they have 2-pins or wires as leadins. Anyone shed some light on these or the company Victoreen?

I have:

GV3B-400
GV4S-310
GV4S-3100
GV4S-410

Victoreen? Those are probably tubes for geiger counters. There are collectors of geiger counters (I've met one at fleas around here), and they often need to find new sensor tubes.

If they are glass, they are rather early first-generation ones. Later ones used envelopes less opaque to radiation...

From boatanchors@theporch.com Wed Apr 3 14:27:58 1996
From: "James C. Owen, III" <owen@apollo.eeel.nist.gov>
Subject: Re: GV3R???
Message-ID: <37844.owen@apollo.eeel.nist.gov>

In message Wed, 3 Apr 1996 08:56:29 -0600 (CST),
John Shriver <jas@shiva.com> writes:

> From: Ray Cote <75121.100@compuserve.com>

>

> <it is marked GV3A 1300R,

>

> I have a few of those also and cannot ID them either. All I know is

> they are made by Victoreen and they have 2-pins or wires as leads.

> Anyone shed some light on these or the company Victoreen?

> I have:

> GV3B-400

> GV4S-310

> GV4S-3100

> GV4S-410

>

Victoreen, Inc makes among other things VERY High resistance resistors in the type of package you describe. Values range from 1 meg to 100,000 meg. These resistors are used in Electrometers and other high quality instruments. Don't touch the glass bulb or the oil from your skin will cause a leakage path that will be a lower resistance than the resistor and ruin the value.

Victoreen, Inc

6000 Cochran Rd

Cleveland, OH 44139-3395

216-248-9300

73 Jim K4CGY

From boatanchors@theporch.com Wed Apr 3 14:27:58 1996

From: bill@texan.frco.com (William Hawkins)

Subject: Re: GV3R???

Message-ID: <9604031605.AA08978@texan.frco.com>

I can't xref them either, but Victoreen was into high voltage as well as high resistance. If the leads come out each end, it's a resistor. if it looks like a tube, it's probably a high voltage (low current) regulator tube. Probably 400 VDC for a GV3B-400, but I dunno about the GV4S-3100. Was there an R after that, as in 310.0?

Bill Hawkins

From boatanchors@theporch.com Wed Apr 3 14:27:58 1996

From: John Kolb <jlkolb@cts.com>

Subject: Re: GV3R???

Message-ID: <Pine.SC0.3.91.960403083750.11894A-100000@sd.cts.com>

On Wed, 3 Apr 1996, Ray Cote wrote:

> are made by Victoreen and they have 2-pins or wires as leadins. Anyone shed
> some light on these or the company Victoreen?
> I have:
> GV3B-400
> etc.

Quite possibly GM (Geiger Muller) tubes for radiation monitors.

John Kolb KK6IL

From boatanchors@theporch.com Wed Apr 3 14:27:58 1996

From: Karan Lee Carruth <klccarru@tenet.edu>

Subject: Re: GV3R???

Message-ID: <Pine.OSF.3.91.960403120157.19859C-100000@alpha.tenet.edu>

On Wed, 3 Apr 1996, John Shriver wrote:

> From: Ray Cote <75121.100@compuserve.com>
>
> <it is marked GV3A 1300R,
>
> I have a few of those also and cannot ID them either. All I know is they
> are made by Victoreen and they have 2-pins or wires as leadins. Anyone shed
> some light on these or the company Victoreen?
> I have:
> GV3B-400
> GV4S-310
> GV4S-3100
> GV4S-410
>
> Victoreen? Those are probably tubes for geiger counters. There are
> collectors of geiger counters (I've met one at fleas around here), and
> they often need to find new sensor tubes.
>
> If they are glass, they are rather early first-generation ones. Later
> ones used envelopes less opaque to radiation...
>

If I remember correctly, these are voltage regulator tubes used in Geiger
and scintillation counters. They were made by Victoreen,

Victoreen, Inc.
6000 Cochran Road
Cleveland, Ohio 44139-3395
(216) 248-9300 FAX: (216) 248-9301

They are alive and well, still making all kinds of radiation detecting equipment. I suspect they can send or fax you spec sheets on those tubes.

Lenox, WA50VG
klccarru@tenet.edu

From boatanchors@theporch.com Wed Apr 3 14:27:58 1996
From: BRICKEY_PETER@Tandem.COM
Subject: Heathkit knob and a question
Message-ID: <199604030933.AA25401@post.tandem.com
\POS,\$ZNET 5>

Hi;

I need a knob for my Heathkit DX-60B, it is a standard small Heath knob but is off white in color. Can anybody help?

I also have an EICO regulated power supply that uses a 5AR4 as a rectifier. It has pooped out and I the only 5AR4 that I have is a 5AR4/GZ34, AES wants big bucks (call) for this tube. As I have a lot of 5U4GBs and noticed that the pin outs are the same, is there any reason why I cannot use a 5U4GB?

I can not find any info on the 5AR4 except for the data in the ARRL handbook, what was it used for, why does AES want BIG bucks for this tube?

73's Peter

From boatanchors@theporch.com Wed Apr 3 14:27:58 1996
From: dlkerl@elvis.b11.ingr.com (Dan Kerl)
Subject: Re: Heathkit knob and a question
Message-ID: <199604031833.AA16485@elvis.b11.ingr.com>

> I also have an EICO regulated power supply that uses a 5AR4 as a
> rectifier. It has pooped out and I the only 5AR4 that I have is a
> 5AR4/GZ34, AES wants big bucks (call) for this tube. As I have a lot
> of 5U4GBs and noticed that the pin outs are the same, is there any
> reason why I cannot use a 5U4GB?

>
> I can not find any info on the 5AR4 except for the data in the ARRL
> handbook, what was it used for, why does AES want BIG bucks for this
> tube?

This tube has the desirable qualities of low impedance, relatively high voltage and current ratings and, having an indirectly-heated cathode, slow warmup. It was heavily used in both guitar and hi-fi amplifiers, which explains its high price (particularly NOS units from Mullard). Sovtek was selling Russian clones at one time; I don't know if they still are.

Dan Kerl
dlkerl@ingr.com

From boatanchors@theporch.com Wed Apr 3 14:27:58 1996
From: "James C. Owen, III" <owen@apollo.eeel.nist.gov>
Subject: RE: Heathkit knob and a question
Message-ID: <48972.owen@apollo.eeel.nist.gov>

In message Wed, 3 Apr 1996 11:36:02 -0600 (CST),
BRICKEY_PETER@Tandem.COM writes:

> As I have a lot
> of 5U4GBs and noticed that the pin outs are the same, is there any
> reason why I cannot use a 5U4GB?
>
Yes the 5U4GB has a higher filament current 3A to the 5AR4's 1.9A and the basing is not the same, one plate is on a different pin. However, if the transformer could handle the higher filament current then the socket could be rewired and the 5U4 should work ok.

> why does AES want BIG bucks for this tube?
>
Supply and demand.

> 73's Peter
>

From boatanchors@theporch.com Wed Apr 3 14:27:58 1996
From: Henry van Cleef <vancleef@bga.com>
Subject: Re: Heathkit knob and a question
Message-ID: <199604031906.NAA09659@zoom.bga.com>

As BRICKEY_PETER@Tandem.COM said
>

> I also have an EICO regulated power supply that uses a 5AR4 as a
> rectifier. It has pooped out and I the only 5AR4 that I have is a
> 5AR4/GZ34, AES wants big bucks (call) for this tube. As I have a lot
> of 5U4GBs and noticed that the pin outs are the same, is there any
> reason why I cannot use a 5U4GB?
>

GZ34 was a European heater-cathode full-wave rectifier with approximately the same voltage and current ratings as the 5U4. It was given the US designation 5AR4 and manufactured by US manufacturers after about 1959.

In application, the differences between a 5U4 and 5AR4 are:

1. Higher filament current in 5U4.
2. Higher forward resistance and voltage drop in 5U4 (55 volts at 225 ma. vs. about 20 in 5AR4).
3. Fast heating in 5U4. Tube begins to conduct after about 3 seconds, giving a high voltage surge on the B+ line until other tubes begin to conduct at 10-11 seconds.

If you want to substitute, check that the transformer can supply the heater current, and that the voltage surge won't pop electrolytic caps, etc., in particular. The higher voltage drop in a regulated power supply may cause the unit to drop out of regulation when drawing rated current at high voltage (i.e., the regulator tubes "saturate" because of low plate voltage). Also, if the unit has a gas discharge voltage regulator (VR tube or 5651), make sure that the regulator won't get overcurrent on power-up surge.

The 5AR4 was a popular tube in home entertainment stereo hi fi amplifiers, so is in demand for the "golden ear" crowd. It would feed four 6L6-class tubes (more often, little horrors like the 7591) and preamp stages, and was generally used with power transformers over 700 VCT plate winding (the max you can use with a filament rectifier and 450 volt electrolytics in a cap input filter, because of surge voltage). Most of these amplifiers were notorious tube eaters, and the death of a 7591 because of gas would suck the 5AR4 dry.

When I see a 5AR4 used in something, I generally say "watch out---not conservative design," because so many designs that used it were nasty compromises to get a "leedel more power" out of things. Personally, I got "religious training" in using 80's and 5U4's as a young engineer, and much prefer to use them, but you've got to watch out for the surge voltage, even if you're willing to derate the unit to compensate for the higher voltage drop.

The alternative is 1N4007's, but these put voltage on the B+ line the instant power is turned on.

--

Hank van Cleef vancleef@bga.com vancleef@tmn.com

From boatanchors@theporch.com Wed Apr 3 07:47:23 1996
From: "Greg Parsons A.K.A. Rat" <gregp@galileo.mis.net>
Subject: info needed on Heathkit Model 10-18 O-Scope and Manual needed
Message-ID: <1.5.4b12.32.19960403035910.002f8b88@galileo.mis.net>

Hi gang,

Well I was walking around the E-Town hamfest today, and what do I see setting under a table? You got it, a Heathkit O-Scope, well I didn't have one, and the price looked good, (\$10) so I bought it, what comments does the group have on this unit? This is the first scope I have had, so any tips? is there a FAQ for scopes somewhere? thanks for any information.

73,
Greg
KE4000
gregp@mis.net

From boatanchors@theporch.com Wed Apr 3 07:47:23 1996
From: Jim Dillon <beadgal@ptialaska.net>
Subject: Info?:Signal Slicer by CE
Message-ID: <01BB20C3.CC8991E0@juneau_96.dialups.ptialaska.net>

Hi Productive Detectors-

Does anyone know anything about the Central Electronics slicer? Like what is i.f. input kc.? these are the 10A/B, 20A, 100V xmit folks who never made a receiver, but I know a garage where a slicer rests and I wonder if it would mate with my R390/390A (offspring=bowling balls?) for 100% HS SSB. Or is the CE Slicer a sideband generator (why would it be-CE made only SSB rigs?) Guess its a trip to the garage.....Info appreciated
Thanks Jim Dillon beadgal@ptialaska.net

From boatanchors@theporch.com Wed Apr 3 07:47:23 1996
From: Sandy Blaize <70401.134@compuserve.com>
Subject: Re: Linear on AM
Message-ID: <960403060311_70401.134_IHD59-1@CompuServe.COM>

The Doherty amplifier was popular. It is fine if you stay on ONE frequency

with ONE transmitter.

The biggest one I ever saw resided in Bonaire, Netherlands Antilles. It belonged to "Trans World Radio".

It was a ****BIG**** Continental. 4 BIG jugs in the final, "vapor cooled" (they boil

distilled water!) The beast was driven with a 50 KW driver and it ran 500 kw output!!! It was (and I think still is) on 800 khz. What a beast! Wonder if it would blow all the SSB guys off of 3880??!!!!

This rig wasn't a boat anchor, it was the "Boat"!

73,

Sandy W5TVW

From boatanchors@theporch.com Wed Apr 3 07:47:23 1996

From: pbock@melpar.esys.com (Paul H. Bock)

Subject: Re: Linear on AM / Mystique of plate modula

Message-ID: <9604031341.AA19386@syseng1.se.melpar.esys.com>

> From what I remember reading, it is not possible to attain
>100% modulation using grid or screen modulation methods. It is
>using supressor modulation, but at the expense of very low efficiency.
>This is mainly why plate modulation is the preferred method of
>achieving an AM signal.

Remember also that in AM broadcast service assymetrical modulation is allowed (and commonly used) and the FCC modulation percentage limits for Standard Broadcast Service (AM) are 100% on negative peaks and 125% on positive peaks.

73,

Paul, K4MSG

From boatanchors@theporch.com Wed Apr 3 07:47:23 1996

From: Michael.J.Knudsen@att.com

Subject: Re: Linear on AM / Mystique of plate modulation

Message-ID: <9604022217.AA05212@bock.ih.att.com>

Let's see, from what I learned when studying for the General Class back in 1960, and some college courses thrown in for confusion....

First, it's hard to get linear control of RF output from the grid, over a wide percentage of modulation. Modulating by a seaprte grid from the RF (such as screen modulation in the DX-40, or a pnetagrid

converter in a signal generator) is better, but still hard to get clean over 50%.

The problem is that AM requires adding energy to the output. If I remember right, a 100% modulated AM signal has 50% more energy (power) output than during a silent period, with half of that extra power in each sideband. That power has to come from somewhere, and plate modulation supplies it directly from the modulator tubes thru the big transformer.

You can linearize any system and make it sound good by detecting the RF output and using it as negative feedback to the audio drivers -- Collins SSB rigs do something like that, as do AM broadcasters.

As someone mentioned, the "brute force" of plate modulation may cost the most in iron, glass, and copper (at least vacuum doesn't weigh much), but saves money in energy efficiency. You run the plate-mod'd final Class C for 70-80% efficiency, and the audio modulator push-pull Class B for 50%, so your overall efficiency at 100% mod is two-thirds of the way from 50% to 80%, or about 70% on a good day.

A linear RF amp must run Class B at best, for 50% overall efficiency.

Whatever. We didn't worry much about the electric bill back with our DX-40s running 60 - 75 W input, but I remember guys on the air telling me to buy or build a plate modulator for that rig, and how it would sound so much better and have more punch on the air. How true that really is I can't say.

The DX-40/60 had a neat trick of reducing the idling carrier level between speech syllables (to save power and heat on the 6146), so everyone with an S-meter could tell you were using a Griefkit. Maybe the real point of plate-mod'ing was to make them think you had a Globe or EICO.

BTW, to get good linearity on plate mod, your final amp has to act like a resistor, and give N% more current when the modulator increases momentary plate voltage by N%. This may require feeding some of the modulating voltage to the screen grid as well as the plate. So some of the best plate-mod rigs may be doing a little screen mod on the side :-)
73, mike k aa9rg

From boatanchors@theporch.com Wed Apr 3 07:47:23 1996
From: FRANKK6NL@aol.com
Subject: Linears and AM
Message-ID: <960402230926_262750874@emout04.mail.aol.com>

I am not sure in this discussion that anyone one may have mentioned that the linear is biased to the mid part of its dynamic range (not from near the bottom like in like in SSB). The modulated AM moves up and down from that

point. At the that point the linear is only about thirty percent efficient. Thus considerable power is wasted in dissipation , It was used in BC stations because overall it can be cheaper to do it that way despite the power losses than generating AM power to modulate a final amplifier having the same output capability.

From boatanchors@theporch.com Wed Apr 3 14:27:58 1996
From: QLF%mimi@magic.itg.ti.com
Subject: re: LINEARS ON AM (Somewhat long - sorry)
Message-ID: <9604031747.AA07370@itg.ti.com>

From: Brad Bradfield QLF

Subj: re: LINEARS ON AM (Somewhat long - sorry)

Don Hlinsky recently commented on the Western Electric AM broadcast transmitters and I thought I'd through my two-cents worth into the thread.

The Western Electric transmitters Don mentioned used a Doherty amplifier in the final. The Doherty amplifier used two tubes, one biased Class-B to carry the AM carrier, and the other biased Class-C to carry the modulation peaks. Phase shift networks were required to properly drive and recombine the outputs of the two tubes. These phase shift networks were somewhat tricky to adjust as the output impedances of the tubes varied greatly with modulation.

Up until probably 1940, or so, Western Electric was still building a water cooled 5 kW transmitter, probably the last water cooled 5 kW on the market. Everybody else had long since gone to air cooling at that power level, for instance, RCA's BTA-5 series. Western Electric did eventually go to air cooling with their Doherty's too.

Dr. W. H. Doherty worked for Bell Labs and invented the Doherty amplifier in the mid-30's, and presented the work as a paper at the Institue of Radio Engineers (the predecessor of the IEEE) annual convention in May, 1936. I have in my collection an original copy of his paper presented at the convention.

Doherty amplifiers do in fact, still exist today. Continental Electronics in Dallas manufactures (among other things) broadcast transmitters and high power international shortwave transmitters. Most of these high power transmitters (100 kW and up) still use a Doherty final. The limitations of high level plate modulation at higher power levels primarily comes from the increasingly large amounts of iron and copper required in the modulation transformers and/or reactors. Not that high power, high level plate modulation is not possible. WLW in Cincinnati built and operated a 500 kW (!!) high level plate modulated transmitter on the AM broadcast band for several years in the 30's. Fifteen years or so the transmitter still existed and was a part of the building. Find

a library that has the "Proceedings of the IRE" and look at the paper on the WLW transmitter in the October 1934 edition. Great reading for AM buffs.

As an aside, Jim Weldon, who formed Continental Electronics, got his real start in the business building high power transmitters for some of the Mexican border blasters. These went as high as 500 kW. Although one licensee had a license for a 750 kW power house, Weldon insists that he never had more than 500 kW. These Weldon built border blasters were Dohertys.

As a broadcast engineer in the early 70's, I maintained a 1945 vintage RCA BTA-5F, 5 kW AM transmitter, still in daily use. When we scrapped the transmitter in 1980, I salvaged for myself one of the final amplifier tubes (an 892R) and the large RCA emblem from the front panel. I also have manual to the rig with the schematic color coded and printed on oil skin. The RCA was high level plate modulated.

The primary problem with grid modulated AM and linear amplified AM is the difficulty in maintaining linearity, particularly at high modulation levels. Grid modulated broadcast transmitters were never popular because of this, with some Dohertys being the exception.

If anybody wants to converse on this topic further, contact me directly. Sorry to take up so much bandwidth, but thought it would be of interest.

73's

Brad Bradfield, WB0CGH

QLF @ MSG.TI.COM

From boatanchors@theporch.com Wed Apr 3 14:27:58 1996
From: kilgore@dev.tivoli.com (Jeff Kilgore)
Subject: Need knob for Heathkit HR-10B
Message-ID: <9604031452.AA25740@wichita.tivoli.com>

I need an RF gain knob for a Heathkit HR-10B. This is one of those small grayish ones that appear on the HR-10B, the HW-16, etc. Does anyone have one they would be willing to sell me?

73,
Jeff, KC1MK

From boatanchors@theporch.com Wed Apr 3 07:47:23 1996
From: Ray Cote <75121.100@compuserve.com>
Subject: Nems Clarke
Message-ID: <960403104051_75121.100_FHI29-3@CompuServe.COM>

I have a Nems Clarke VHF receiver Model 1502A and am looking for schematics or manuals for same. It has a 3" high black bezel across the top almost the width of the radio with the name Nems Clarke in metallic script across the speaker grill, 2 3" in diameter meters splitting the center, one center reading for getting tuned to the center of the station and the other for signal level peak reading. It is tunable from 50 to 250 Mhz with a hand crank.

I have heard of a few others having some similar sets and also that that the modular construction would lead to similar modules being in different sets. Anyone having data on these, either instructional or schematic please let me know so we can compare notes. Would like to have copies of any paperwork available.

Regards from Honolulu,
Raymond J. Cote

From boatanchors@theporch.com Wed Apr 3 07:47:23 1996
From: "Ray L. Mote" <rmote@rain.org>
Subject: Re: R-392 contracts
Message-ID: <Pine.SUN.3.91.960403010305.23351B-100000@coyote.rain.org>

You listed the 11653-PH-52 contract as "Collins R-392". My unit is S/N 3786M-1 (and the "-1" was hand-stamped to the right of the serial number area). The nameplate says it was made by Stewart-Warner Electric Co. for Collins Radio co.

How about collecting R-392 contract data, since you already collect the R-390 and R-390A stuff? Looks like you already have some of it, only need the guys 'n gals to send more info.

73.....Ray Mote, W6RIC <rmote@rain.org>

From boatanchors@theporch.com Wed Apr 3 07:47:23 1996
From: David Metz <metzd@cfw.com>
Subject: R390's/6082 tubes
Message-ID: <9604030327.AA09901@milo.cfw.com>

Yesterday I received my copy of glass audio. There is an ad from New Sensor Corp for "oddball" tubes. At \$4 ea is listed the weirdo 6082WB JAN(Raytheon) for the R-390 (not an A!) power supply..

Additionally: 6U8A's JAN @ the 10 quantity: \$1.60
6AN8's Jan @ the 10 quantity:\$4.70

THE KICKER: \$100 MIN ORDER

This is not an endorsement, but I thought those with the R-390's might be interested as AES is presently \$11 for the 6082's.

Their Phone # is 800 633 5477. Unfortunately, I'm not in the market to pool an order for these as about a year ago I bought enough for quite a few years at present consumption!

FYI

73's dave metzd@cfw.com

From boatanchors@theporch.com Wed Apr 3 07:47:23 1996
From: Sandra L Knepper <slkst29+@pitt.edu>
Subject: Re: R390's/6082 tubes
Message-ID: <Pine.3.89.9604030751.A12558-01000000@unixs2.cis.pitt.edu>

For those of you who need tubes at very reasonable prices, try calling Donna at United Electronics in Newark, NJ at 800-526-1275 or

Don Gies, K4GIT at 904-475-1950.

Dave, W3BJZ
Publisher of the Collins Journal

From boatanchors@theporch.com Wed Apr 3 14:27:58 1996
From: mack@mails.imed.com
Subject: R390A SSB adaptor
Message-ID: <9603038285.AA828561524@mails.imed.com>

I received a number of replies (which most of you saw). No one seemed terribly tied to only hollow state, so I think a hybrid is probably in order.

Actually, the hardest part of this project is going to be finding tube sockets!! I don't understand it. No one manufactures or distributes sockets for hollow state anymore :<).

I will try to track down the number for AES in the archives and see what their stock looks like.

I am looking to put in synchronous detection for DSB-SC, SSB w

carrier, and AM. This should allow operation with current and proposed SW broadcast. A product detector for SSB is the easiest part.

Thanks to all for the interest.

Ray Mack
WD5IFS
mack@mails.imed.com

From boatanchors@theporch.com Wed Apr 3 07:47:23 1996
From: dt@scotborders.co.uk (David Topham - Arts & Science)
Subject: Re: Red Mil-Spec Tubes
Message-ID: <9604030110.AA09318@scotborders.co.uk>

Colored tubes / coloured valves

Here in the UK there was a WWII pentode used in RADAR. It was called EF50 and was made by Philips - the story of how the parts were rescued from Holland for manufacture in Britain by Mullard is an exciting one. However, we always felt the US Sylvania ones were better. The tube was in an aluminium can and most were silver, but some were RED. If you got one that was both red *and* Sylvania you really had something. At college they made us make op-amps out of these even though little black plastic things were available to do the same job. It was "character building".

73, David Topham, GM3WKB dt@artscience.scotborders.co.uk

From boatanchors@theporch.com Wed Apr 3 14:27:58 1996
From: Michael.J.Knudsen@att.com
Subject: Re: Red Mil-Spec Tubes
Message-ID: <9604031718.AA05488@bock.ih.att.com>

Character building? There's an idea! I remember when Jr High schools taught Latin (and some of you may even remember Greek, whew!) for the purpose of building character and exercising young minds in rigorous thought.

Suppose our E. Engineering colleges decided to teach a semester of firebottle design, complete with heavy lab work, for the same purpose. Yeah, right. Never happen. Besides, all those schools would stop selling their attics full of toobs to AES and we couldn't get them ourselves. 73, mike k aa9rg

From boatanchors@theporch.com Wed Apr 3 07:47:23 1996
From: Jim Dillon <beadgal@ptialaska.net>
Subject: Re: S-36
Message-ID: <01BB20B8.421EB2C0@juneau_73.dialups.ptialaska.net>

Hi Jerry and UHFers-

You can listen to TV sound on it-great garage radio for baseball season- and FM-tweak band 3 a bit and monitor the 2-meter crowd, wrap the 955 acorn tube in some fiberglass and use it as part of packet rig with BC-767. Borrow the knobs to put on an SX-28. Monitor the 39 Mc. jail security band...not to mention full 6 meter coverage all modes. Monitor 47-49 cordless phone/baby monitor.... Aircraft band monitor.....What a great piece of gear! I don't have a manual, but I can send you copies of basic schematic (pretty hard to read, but all there)

Did you get my e-mail (Jerry) re: Hammarlund. Thanks
Jim Dillon beadgal@ptialaska.net

From boatanchors@theporch.com Wed Apr 3 07:47:23 1996
From: ellope@isns1.shasta.com (jerry+deb)
Subject: s36
Message-ID: <199604030049.QAA21812@isns1.shasta.com>

Well I picked up anther one today. A hallicrafters s36 does anyone know anything about this one? where can i find a manule it.
jerry, ellope@shasta.com

From boatanchors@theporch.com Wed Apr 3 07:47:23 1996
From: MODSTEPH@ACS.EKU.EDU
Subject: Re: s36
Message-ID: <01I32U1WYT02000XAZ@ACS.EKU.EDU>

27.8 to 143 mc in 3 bands. 13 tubes plus voltage regulator and rectifier; 5.25 mc IF; sensitivity 2uv at 30 mc for 50 mw audio output; AM and FM reception, adjustable selectivity, tone control, S-meter, noise limiter, antenna trimmer, external power receptacle; 3 watts audio output into 500 or 1500 ohm load; BFO pitch adjustable. Mechanical bandspread dial. For 115 or 230 VAC. New (1942) \$307.50.

Hope that helps... and the S-36A is the government version (which is the 1942 date).

73, A1 N5AIT
modsteph@acs.eku.edu

From boatanchors@theporch.com Wed Apr 3 07:47:23 1996
From: Henry van Cleef <vancleef@bga.com>
Subject: Re: s36
Message-ID: <199604030225.UAA04072@zoom.bga.com>

As jerry+deb said

>

> Well I picked up antherone today. A hallicrafters s36 does anyone know
> anything about this one? where can i find a manule it.

> jerry, ellope@shasta.com

>

A.G. Tannebaum can furnish a manual copy for the S-36 for \$14. S-36A is covered in Rider XIV. I think that the two sets are virtually identical for servicing purposes. I have an S-36A.

27-143 Mhz. (actually, to 145, but the dial ends at 143) in 3 bands. 5250 Khz IF with "broad" and "narrow" bandpass (uses over-critical coupling for "broad"), AM detector and FM limiter-discriminator. Spec sensitivity is 2 microvolts at 30 Mhz, 10 microvolts at 135 Mhz for 50 milliwatt output. Audio output is nominally 3 watts, flat through 10 Khz. Actual measurements show it will put out a solid 10 watts, and is 3db down at 80 Hz and 17 Khz in the "hi fid" position of the tone switch---rather respectable performance for a 1940 design. Speaker outputs are 500 ohms and 5000 ohms (500 ohms is "70 volts"---I measured 72 actual on a dummy load). The front end (RF amp, local oscillator, and mixer) are acorn tubes in a shielded demountable assembly.

The set is not what I would consider to be a "stellar performer" in some respects. On commercial FM, sensitivity is not particularly high, and 5250 Khz is a bit narrow for passing highly-modulated FM. The FM deemphasis is 113 microseconds, needs to be changed, and the set really should have a 19 Khz trap in the audio. Those acorns are cute, but pretty wimpy compared to postwar 7-pin VHF tubes (6AG5, 6AK5, 6DK6) and the local oscillator is somewhat cranky. I've thought about putting some heavy bus bar "pins" on some 7-pin sockets to use more serious tubes in the acorn sockets without modifying the set.

Problems to look for: "resistor rot," leaky postage stamp caps (the set uses no "paper" or electrolytic caps, but a lot of the postage stamp jobs actually are molded paper), dirty switch contacts, dirt in the RF deck.

--

Hank van Cleef vancleef@bga.com vancleef@tmn.com

From boatanchors@theporch.com Wed Apr 3 07:47:23 1996
From: Sandy Blaize <70401.134@compuserve.com>
Subject: s36
Message-ID: <960403060321_70401.134_IHD59-7@CompuServe.COM>

All you S-36 "Phreaks" out there! If you are a "newbie" to it, bear in mind that they are, by today's standards, moderately to seriously deaf! This is the stock ones with no "pre-amps" or modifications. One I saw took almost a 15 microvolt signal to get thru it on the high end near 144 mhz! They are a bit better on 6 meters, but remember, you are looking at pre-war technology basically! the 2 meter band didn't exist, it was 2-1/2 meters..112 Mhz then! It *was* an advance over the acorn tubed "TBY" which was a modulated oscillator, superregenerative receiver set!

73,
Sandy W5TVW

From boatanchors@theporch.com Wed Apr 3 07:47:23 1996
From: cfb@novum.com
Subject: Schematic/Info on Hallicrafters WR-1000
Message-ID: <Chameleon.960402203443.cfb@>

I'm the one that just bought the Hallicrafters WR-1000 from Dave Metz.

My wife thinks its cute compared to "that big one next to the desk" (Hammarlund HQ-129-X).

Anyone have the schematic or manual for this? Also, does anyone know the manufacturing dates for Hallicrafters gear?

Charles F. Bacon
cfb@novum.com

From boatanchors@theporch.com Wed Apr 3 07:47:23 1996
From: Jim Dillon <beadgal@ptialaska.net>
Subject: RE: Schematic/Info on Hallicrafters WR-1000

Message-ID: <01BB20C8.5CE54D20@juneau_76.dialups.ptialaska.net>

From: cfb@novum.com[SMTP:cfb@novum.com]
Sent: Tuesday, April 02, 1996 12:37 PM
Subject: Schematic/Info on Hallicrafters WR-1000

just bought the Hallicrafters WR-1000 from Dave Metz.

My wife thinks its cute compared to "that big one next to the desk" (Hammarlund HQ-129-X).

Anyone have the schematic or manual for this? Also, does anyone know the manufacturing dates for Hallicrafters gear?

Charles F. Bacon
cfb@novum.com

Hi Charles- I think I have the Sams for it, if you want leave yer snail address and I will copy and send. Its very interesting inside-uses left-over turret TV tuner for front-end. Made 1953. get some brasso for trim, knob inserts. Go-jo, then armour-all the case. If it won't stay on band, rub tuner contacts with rough cloth or just spray some contact cleaner in housing and spin the band selector couple dozen times. Great radio....looks like it belongs on yacht or in hunting lodge.

Jim Dillon beadgal@ptialaska.net
seeking Halli SX-9-14 RCA ACR-111, AR/CR-88

From boatanchors@theporch.com Wed Apr 3 07:47:23 1996
From: Kevin Pease <hamradio@mm1001.theporch.com>
Subject: Re: SSB slicer for R390A
Message-ID: <Pine.LNX.3.91.960402201213.21358B-1000000@mm1001.theporch.com>

A couple of NE-602's an upper and lower sideband filter,an ne656 PLL for sync detection, An artisan r-390 BFO can and you have an instant SSB slicer that meets mike's requirements. A couple of LM-380's for stereo audio and you have selective fading detectors extrodinare.

Sorry for the sand state stuff but I have been contemplating such a device for my tube radios since the hollow state stuff is so hard to find.

I have a B&W SSB adapter but it is pretty large and a pain to use.

Kevin Pease
WB0JZG Mount Juliet, TN.

From boatanchors@theporch.com Wed Apr 3 07:47:23 1996
From: aa4rm%amos.UUCP@mathcs.emory.edu (Marty)
Subject: Re: The ultimate R390 accessory/sync detector
Message-ID: <9604030252.AA03022@amos.YP.mystnite>

That YRS-1 is a sooper rare... GE's hope against SSB. The synch. det. method was leaked to the ham community in the 3/55(?) CQ mag.

However, the complexity was too great, the bandwidth too high, and cost too much when compared with Collins' filter-type SSB mod./de-mod. schemes.

Besides, it couldn't be packaged compactly like Gen'l Lemay's KWM-1.

I know a man with a YRS-1 manual (think the govt. bought a few for eval.) but I've never seen it or a unit. Sandy, you're a lucky buck for having owned one!

Sic transit gloria, DSB / Synch. detection.

MR

From boatanchors@theporch.com Wed Apr 3 14:27:58 1996
From: lstolz@tekelec.com (Lynn Stolz)
Subject: TRADE: 2nd Ed. Radio HB for 3rd Ed. Radio HB
Message-ID: <9604031941.AA08303@london.oh.tekelec.com>

I'm Looking to trade a second edition (1936) Radio Publications Handbook for a third Edition (1937) Radio Handbook. The 3rd edition has the title "Frank C Jones Radio Handbook".

Anyone having a duplicate 3rd edition that needs a 2nd edition, I would like to hear from you.

Lynn Stolz, N8AJ -- lstolz@tekelec.com

From boatanchors@theporch.com Wed Apr 3 07:47:23 1996
From: "F r6fqHo!ht" <75121.100@compuserve.com>
Subject: Tubes?

Message-ID: <960403051237_75121.100_FHI60-1@CompuServe.COM>

Paul Wrote

<

<Gang,

<The title says it all. I need a source for nuvistors.

<

<Regards,

<

<Paul WA60KQ

Here are a few that you might be able to use!!

Part Number followed by AES price, then my price. All plus shipping UPS.

NUVISTORS

6CW4 & 4A28	ea	\$17.00	\$13.00 ea
7119	4 ea	\$13.00	\$10.00 ea
7586	1 ea	\$30.00	\$25.00 ea
7587	1 ea	\$30.00	\$25.00 ea
7895	8 ea	\$12.00	\$ 8.00 ea
8627	9 ea	\$20.00	\$20.00 ea

Also have the following Miscellaneous tubes

6E5 (eye tube)	3 ea	\$24.00	\$19.00 ea
6BM6 & 6A4		\$90.00	\$65.00 ea
6TF7 (R390A)	6 ea	\$17.00	\$14.50 ea
6U8A	5 ea	\$6.50	\$ 5.00 ea
6V6 & 6V6Y	4 ea	Metal	\$ 9.00 ea
6V6 GT & GTY	45 ea	\$6.50	\$5.50 (glass)
12AX7/5751		\$12.00	\$9.00 boxes of 5
12AU7/5814 A		\$3.75	\$3.00 boxes of 5
5654/6AK5 W			\$3.00 boxes of 5
5670/2C51			\$4.00 boxes of 5
5726/6AL5 W			\$3.00 boxes of 5
5749/6BA6			\$5.50 boxes of 5
5763/6062			\$10.00 ea
8532	40 ea		\$ 4.00 ea

From boatanchors@theporch.com Wed Apr 3 14:27:58 1996

From: maccary@on-ramp.ior.com

Subject: Victoreen GV3R

Message-ID: <m0u4Z51-000TW5C@on-ramp.ior.com>

These things are in fact high voltage regulators. I have one scintillator that uses the 1200 volt version. I worked for many years on geophysical research and we routinely used Victoreen regulators, high meg resistors, geiger tubes and He3 proportional counter tubes in all sorts of exploration instruments.

Mac-WONAX

Lawrence M. MacCary --- A Subscriber at Internet On-Ramp, Inc.

From boatanchors@theporch.com Wed Apr 3 07:47:23 1996
From: Al Klase <alklase@postoffice.ptd.net>
Subject: WANTED: Earphone Elements
Message-ID: <199604031251.HAA09325@ns1.ptd.net>

Does anyone have a source for US Army TA-118/PT earphone elements as used in the TA-1/PT sound-powered field phones?

Thanks & 73,

From boatanchors@theporch.com Wed Apr 3 07:47:23 1996
From: Dube Todd <dube3@n-link.com>
Subject: Wasted space
Message-ID: <316233BB.7683@mail.n-link.com>

It appears that I wounded the bandwidth god when I let a lengthy quote slip by. I received about a dozen squawks over this, so I apologize to those who were offended by this mistake.

Dube

From boatanchors@theporch.com Wed Apr 3 14:27:58 1996
From: bill@texan.frco.com (William Hawkins)
Subject: Re: Wasted space
Message-ID: <9604031554.AA08946@texan.frco.com>

Jeez, Dube, isn't that the way life is? Say something funny, that required some time to create, and you get at most one reply. Make one mistake, that took no time at all, and get a dozen replies.

Why is it that it is so easy to offend people and so difficult to amuse them? Is it just the people on this list? (I don't think so.)

For those who have trouble keeping up, Dube said:

"It appears that I wounded the bandwidth god when I let a lengthy quote slip by. I received about a dozen squawks over this, so I apologize to those who were offended by this mistake."

Bill Hawkins bill@bvc.frco.com

From boatanchors@theporch.com Wed Apr 3 07:47:23 1996

From: lkayser@WorldLink.ca (Larry Kayser)

Subject: What is an AT-1

Message-ID: <9604030106.AA19446@beacon.WorldLink.ca>

AT-1 is a 6ag7 driving 6l6, with a 5u4 rectifier. covers 80, 40, 20, 10 and uses final only keying. This was the first transmitter heathkit produced in which they made serious attempts to shield for TVI proof operation. They tried hard, but used things like 8 pin Octal sockets for extern vfo power and High Level modulation input.

What more do you want to know?

Larry

va3lk / wa3zia

From boatanchors@theporch.com Wed Apr 3 07:47:23 1996

From: David Metz <metzd@cfw.com>

Subject: What is an FRR27?

Message-ID: <9604030342.AA10687@milo.cfw.com>

Tonight a non radio type called me and asked me if I wanted a couple of FRR27's. I said yes. Being one to never look a gift horse in the mouth, could anyone tell me what I said yes to? All I know is that it is rack mount, heavy, and I can't get over to pick it up for at least a month. Thus, the curiosity is overwhelming..

Given that it is a military receiver of some BA proportions, could anyone make me a copy of the manual?

In advance, thanks for any help.

73's dave metzd@cfw.com

From boatanchors@theporch.com Wed Apr 3 07:47:23 1996

From: Sheldon Wheaton <swheaton@sky.net>
Subject: Re: What is an FRR27?
Message-ID: <Pine.SOL.3.91.960402232408.22319E-1000000@sky.net>

Hi David,

The FRR-27 is a Naval Air Traffic Control, self-contained receiver operating from 100 to 156 MHz.

Size is 6 x 17 x 18.75 inches and weight is 36 pounds.

Manual is: NAVSHIPS 92679

Power requirement is 54 watts, 110 vac.

I can't tell if it is fixed frequency or continuously tuned from the picture and info in my index from which the above info came from. It has some siblings, namely the FRR-26 (2-8 MHz), and FRR-30 (.2-.56 MHz).

73, Sheldon KC0CW